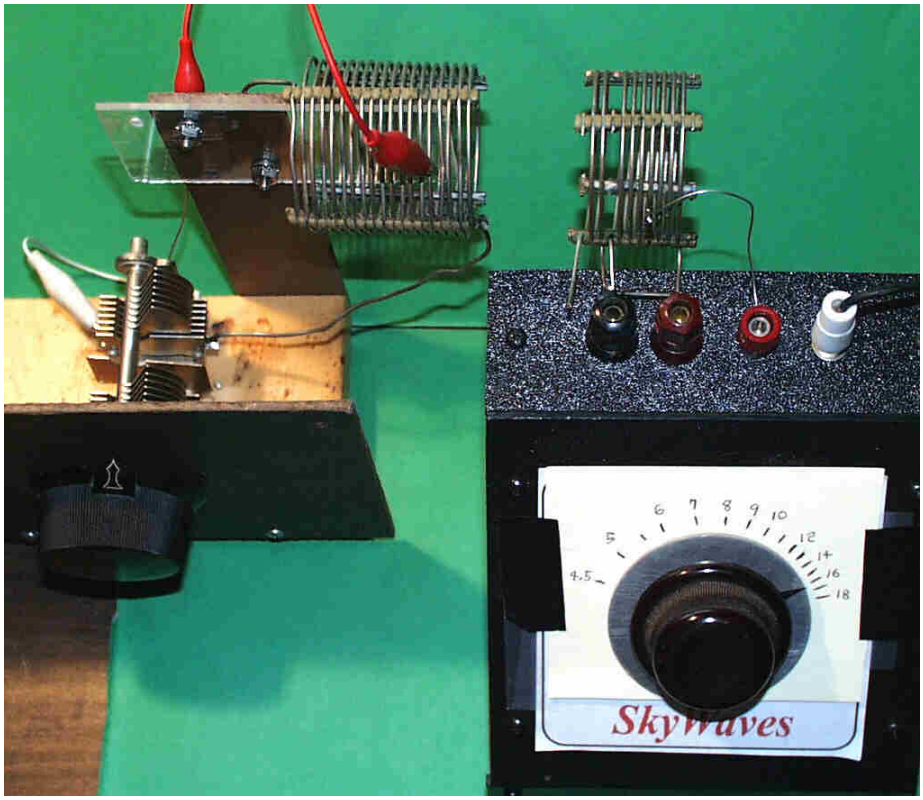
The SkyWaves Short-wave Crystal-set Prototype

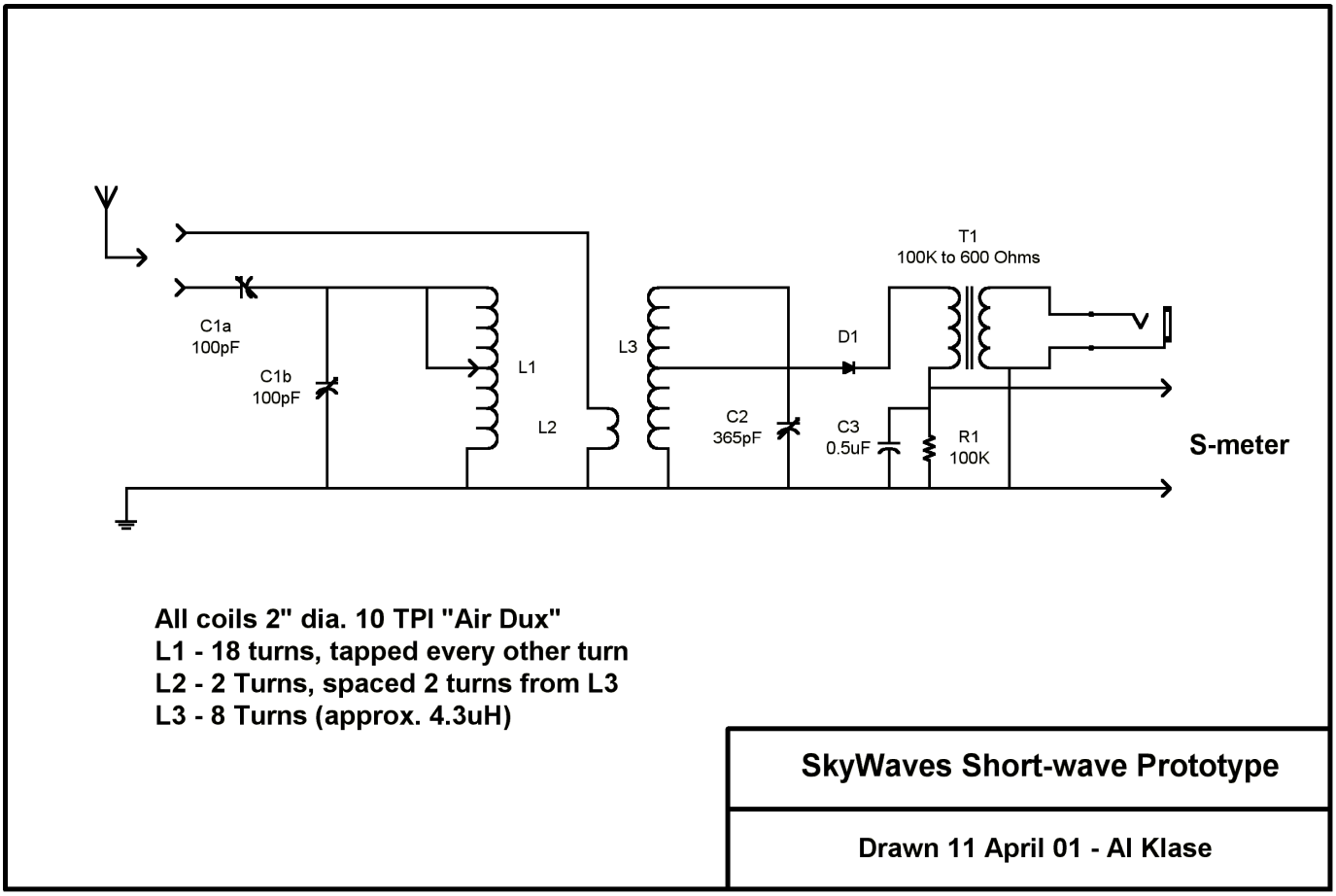
Here's some info on my recent short-wave crystal-set experiments. The basic conclusion is that SW crystal sets are quite worthwhile, and need not be unduly elaborate to give gratifying results. This is especially true on the US east coast where the "prime time" broadcasts are really strong.

A word of warning: You're likely to hear strong, clear English broadcasts from the likes of The BBC, The Voice of Viet Nam, and Radio Taipei. Don't believe it! These are rebroadcast from nearby sites in US and Canada. To sort this out, there is a good frequency list available at: http://www.primetimeshortwave.com/

I the short time I've been at it, I have heard Radio Exterior de Espana , Swiss Radio International, and The Voice of Russia from my West-central NJ location. So intercontinental DX is entirely possible. I even heard a "numbers station" on about 13.5MHz.



This is a simple double-tuned radio built around Air Dux coil stock. I used this because it was handy, but solid bare wire of about 14 gauge on 2" PVC should work just fine. (Strip a length of #14 Romex.) The primary tuned circuit is Tuggle style and offers a reasonable compromise between effective, flexible antenna matching and ease of use. I bent down every other turn on L1 to make it easy to tap with an alligator clip. I equipped the secondary coil with a separate "primary" winding so the set can be used in the single-tuned mode to do a quick band scan. Coupling is controlled by moving the two sections around on the table. The "ground" end of the coils face each other.



Some additional observations: A secondary coil of about 4 – 4.5 uH will tune 5-18 MHz with a 365pF cap. That's where 95% of the action is, so band switching can be avoided. As with most double tuned sets, a calibrated dial on the lightly-coupled secondary really helps sort things out on the air. I'm using sound-powered phones, but signals are strong, so a modest headset will be ok for starters. Just elininate T1, C3, and R1, and connect the headset between the diode and ground.